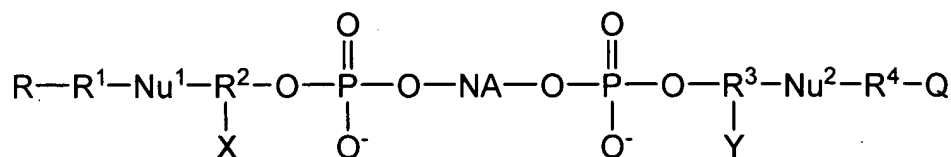


This listing of claims will replace all prior versions, and listings of claims in the application:

1-31. (Canceled)

32. (Previously presented) A probe nucleic acid having the formula



wherein,

NA is a nucleic acid chain comprising nucleic acid monomers selected from the group consisting of natural nucleic acids, modified nucleic acids and combinations thereof;

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

Nu<sup>1</sup> and Nu<sup>2</sup> are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

R is a molecular energy transfer donor;

Q is a molecular energy acceptor; and

X and Y are the same or different and are non-nucleic acid stabilizing moieties that interact to bring R and Q into operative proximity, thereby enabling transfer of energy from R to Q, wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

33. (Currently amended) The probe nucleic acid compound according to claim 32, wherein said molecular energy transfer donor is a fluorophore.

1                   34.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein said molecular energy acceptor is a fluorescence quencher.

1                   35.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein X and Y are both hydrophobic moieties.

1                   36.    (Currently amended) The probe nucleic acid compound according to  
2 claim 35, wherein X and Y are members independently selected from the group consisting of  
3 saturated hydrocarbons, unsaturated hydrocarbons, steroids, fatty acids, fatty alcohols and  
4 hydrophobic peptides.

1                   37.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein natural nucleic acids are members selected from the group consisting of  
3 deoxyribonucleotides, ribonucleotides and combinations thereof.

1                   38.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein said modified nucleic acids are peptide nucleic acids.

1                   39.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein said nucleic acid monomers are joined by linkages that are members  
3 independently selected from the group consisting of phosphodiesters and modified  
4 phosphodiesters.

1                   40.    (Currently amended) The probe nucleic acid compound according to  
2 claim 39, wherein said modified phosphodiesters are members selected from the group  
3 consisting of phosphorothioates and phosphoramidates.

1                   41.    (Currently amended) The probe nucleic acid compound according to  
2 claim 32, wherein said nucleic acid chain further comprises a hybridization enhancing moiety.

1                   42.    (Currently amended) The probe nucleic acid compound according to  
2 claim 41, wherein said hybridization enhancing moiety is a member selected from the group  
3 consisting of intercalating agents, minor groove binders and modified exocyclic bases.

1                   43.    (Canceled)

1                   44.    (Previously Presented) The probe nucleic acid compound according to  
2 claim 32, wherein said compound is immobilized on a solid surface.

1                   45.    (Currently amended) A method for amplifying a polynucleotide, wherein  
2 a probe nucleic acid compound according to claim 32 is a primer in said method, said method  
3 comprising:

4                   (a) hybridizing said primer to said polynucleotide; and

5                   (b) amplifying said polynucleotide.

1                   46.    (Currently amended) The method according to claim 45, wherein said  
2 amplifying is a member selected from the group consisting of polymerase chain reaction (PCR),  
3 nucleic acid sequence based amplification (NASBA), strand displacement amplification (SDA)  
4 and combinations thereof.

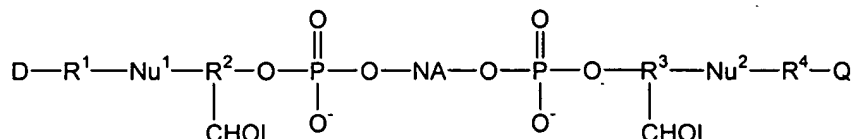
1                   47.    (Currently amended) A method for detecting or quantitating a nucleic  
2 acid, wherein the probe nucleic acid compound according to claim 32 is used as a probe, said  
3 method comprising:

4                   (a) hybridizing said compound to said nucleic acid; and

5                   (b) detecting a change in fluorescence of said compound, thereby detecting or  
6 quantitating said nucleic acid .

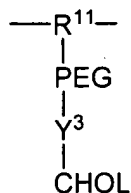
1                   48.    (Previously Presented) The method according to claim 47, wherein said  
2 method comprises a member selected from the group consisting of 5'-nuclease assay, rolling  
3 circle amplification and combinations thereof.

50. (Currently amended) A probe nucleic acid ~~compound~~ having the formula:



wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

51. (Currently amended) The probe nucleic acid compound according to claim 50, wherein R<sup>2</sup>-CHOL and R<sup>3</sup>-CHOL are independently selected and have structures according to the formula:

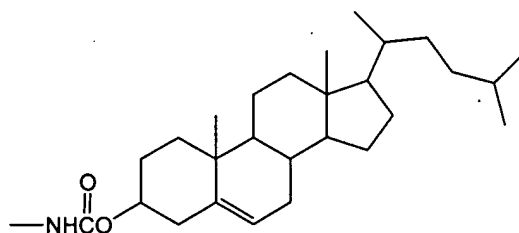


R<sup>11</sup> is a member selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

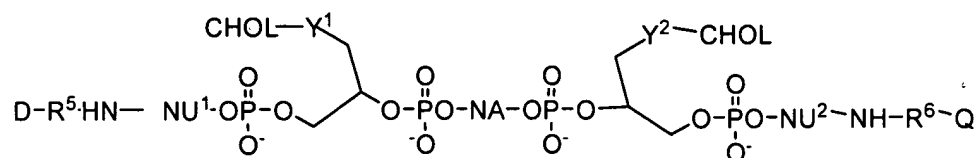
Y<sup>3</sup> is an organic functional group adjoining said PEG to said CHOL.

53. (Currently amended) The probe nucleic acid compound according to claim 51 in which R<sup>11</sup> is substituted or unsubstituted alkyl.

55. (Currently amended) The probe nucleic acid compound according to claim 51, wherein Y<sup>3</sup>-CHOL has the structure:



57. (Currently amended) A probe nucleic acid ~~compound~~ having the formula:



wherein,

NA is a nucleic acid sequence;

Nu<sup>1</sup> and Nu<sup>2</sup> are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

Y<sup>1</sup> and Y<sup>2</sup> are linking groups independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

R<sup>5</sup> and R<sup>6</sup> are linking groups independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

D is a donor of light energy; and

Q is a quencher of light energy,

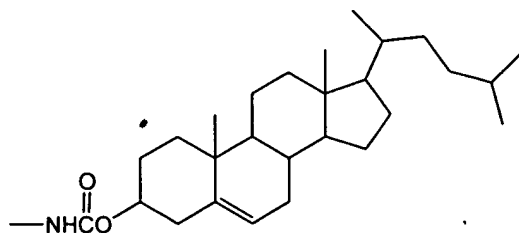
wherein each CHOL interacts with the other CHOL to bring D and Q into operative proximity, thereby enabling transfer of energy from D to Q, and wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

58. (Currently amended) The probe nucleic acid compound according to claim 57, wherein Y<sup>1</sup> and Y<sup>2</sup> are members independently selected from substituted or unsubstituted heteroalkyl.

59. (Currently amended) The probe nucleic acid compound according to claim 58, wherein Y<sup>1</sup> and Y<sup>2</sup> are polyethylene glycol.

60. (Currently amended) The probe nucleic acid compound according to claim 59, wherein said polyethylene glycol has from about 2 to about 20 ethylene glycol subunits.

61. (Currently amended) The probe nucleic acid compound according to claim 57, wherein Y<sup>1</sup>-CHOL and Y<sup>2</sup>-CHOL have the structure:



3

1

62. (Cancelled)